

Notice of Allowability

Application No.

09/772,546

Applicant(s)

ALDRED ET AL.

Examiner

Art Unit

Russell Frejd

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's RCE/Amendment received 16 September 2005.
2. ☒ The allowed claim(s) is/are 1-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11.20.02, 8.26.02
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Russell Frejd
RUSSELL FREJD
PRIMARY EXAMINER

In re Application of: Aldred et al.

Allowance of Application # 09/772,546

1. The following communication is in response to applicant's RCE/Amendment received 16-September-2005. The receipt of formal drawings on 16-September-2005 is acknowledged by the examiner.

Reasons for Allowance

2. The following is an Examiner's Statement of Reasons for the indication of allowable subject matter. The instant application is directed to a non-obvious improvement over the invention described in U.S. Patent No. 6,480,118 to Rao, the improvement comprising a method for characterizing a drilling event in a proposed wellbore, wherein a well plan is determined which includes at least a wellbore trajectory; whereby an estimation of the likelihood of an occurrence of, a position along the trajectory, and a severity of consequences of at least one drilling event is determined and displayed. This patentable distinction is included in each of the independent claims, nos. 1, 13, and 23.

The examiner understands the reasoning behind applicant's amendment changing the term "hazard" in the claims to "event". While the Rao patent utilizes the same "hazard" terminology to describe its invention, there is no dispute in the examiner's opinion that Rao is directed at using acoustical systems to look ahead of the drill bit in the current wellbore to identify geological or environmental features which could be detrimental to the drilling performance. In contrast, the present invention characterizes a drilling event in a proposed wellbore, while estimating a likelihood of undesirable occurrences [see the specification, pages 2 and 8], a position along the trajectory, and a severity of consequences of the drilling event. In light of this

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reasoning, the examiner agrees with the proposition that the present invention characterizes an occurrence or drilling event that is desired to be avoided and/or mitigated, and does not address identification of a geological or environmental feature in a current wellbore as taught by Rao.

The art of record, either individually or in combination, fails to teach, suggest, or render obvious the useful, concrete and tangible <characterizing of a drilling event in a proposed wellbore> having the corresponding structure which is disclosed in the specification and equivalents thereof at least at page 7, line 14 through page 26, line 16, and Figures 1-8. In view of the foregoing, the claims of the present application are found to be patentable over the prior art.

Response Guidelines

3. Any comments considered necessary by applicant **MUST** be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should clearly be labeled "Comments on Statement of Reasons for Allowance".

3.1 Any response to the Examiner in regard to this allowance should be

directed to: Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, or the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279. Inquires of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist (571) 272-2100.

mailed to: Commissioner of Patents and Trademarks
P.O. Box 1450, Alexandria, VA 22313-1450

or faxed to: (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

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Date: 14-November-2005

RUSSELL FREJD

**RUSSELL FREJD
PRIMARY EXAMINER**